

REMARKS

The Examiner's Office Action of October 5, 2004 has been received and carefully reviewed. Claim 4 has been amended, Claims 1-3 had been cancelled, claims 5 -7 had been added. Thus, claims 4 -7 are pending in this application. For at least the following reasons, it is submitted that this application is in condition for allowance.

In the Action, Claims 4-7 are rejected under 35 U.S.C. 102 (b) as being anticipated by Nakazawa et al. The invention defined in claim 4 relates to a lead frame for resin sealed semiconductor device. The characteristics of the invention claimed in independent claim 4 are:

- (1) a first region in which a semiconductor chip can be encapsulated with resin;
- (2) a second region, which is adapted to be placed at a runner of a mold,
in which an opening is formed, wherein the opening has
 - (a) one end, which extends to the first region, and
 - (b) another end opposite to the one end being rounded.

Thus, (i) another end of the opening is located in the second region that is adapted to be placed at a runner of a mold, and (ii) another end of the opening is not located adjacent to the first region.

According to this claimed structure, when a degating process is performed, a surplus resin is detached from a lead frame at the one end of the opening in the second region at first, and then detached at another end of the opening finally. At the final detachment, since the surplus resin can be detached along the curve, it is

possible to reduce the impact of the detachment because the surplus resin and a thin surplus resin 4B are unified.

However, Nakazaki does not disclose this structural characteristics at all. The examiner asserted by indicating Fig. 13 that Nakazaki disclosed another end opposite to the one end being rounded. This is wrong, and the Applicant disagrees. In the space 6, the rounded part is located in the cavity 4, which correspond to the first region of the invention, not the second region, which is adapted to be placed at a runner of a mold.

Thus, at the final detachment in a degating process of the device disclosed in Nakazaki, the surplus resin must be detached from a lead frame at another end having straight line (Please refer an end opposite the round part in Fig. 13). When the surplus resin is removed at the straight line of the lead, the thin surplus resin 4B remains at the lead frame because of friction force between the surplus resin and the read frame. This friction force also influences leads, and may cause the leads to be broken or severed.

The reason why the outlet side of the resin material in space 6 is rounded in Nakazaki is that the resin material can be divided smoothly into upper area and lower area in the cavity. Thus, the function and the location of the rounded part of the lead frame between the disclosure of the Nakazaki and the present invention are quite different.

As described above, Nakazaki does not disclose and suggest the above-described characteristics, Claim 4 is deemed to be clearly patentable over Nakazaki, and the rejection to claim 4 accordingly should be withdrawn.

Claims 5-7 depend from claim 4 directly or indirectly so that the rejection to these claims also should be withdrawn.

It is noted that this Amendment has been prepared using the requested new format. If there are any irregularities in this format, it would be greatly appreciated if Applicant's Counsel would be so advised. Should any fee be needed, please charge it to our Account No. 50-0945 and notify us accordingly.

Examination of the amended application is respectfully requested.

Respectfully submitted,



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